Remarks

Applicant respectfully requests reconsideration of this application as amended. The specification has been amended. Claims 56-58 have been amended. No claims have been canceled or added. Therefore, claims 1-58 are presented for examination.

Objections

The Examiner objected to the specification under 37 C.F.R 1.75(d)(1) as filing to provide proper antecedent basis for the claimed subject matter. The specification fails to support the newly added limitation "storage medium" in claims 56-58. Claims 56-58 have been amended to remove the reference to "storage." As such, applicant respectfully requests that the present objection be withdrawn.

35 U.S.C. §101

The Examiner has rejected claims 30-41 and 56-48 under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. Specifically, the Office Action states that claims 30-41 are rejected under 35 U.S.C. §101 because the claims are directed to apparatus claims, but appear to be comprised of software alone without claiming associated computer hardware required for execution. (Office Action mailed 2/26/08 at pg. 2, pt. 5.) The Office Action further states that claims 56-58 are rejected under 35 U.S.C. §101 because the claims are directed to a signal directly or indirectly by claiming a medium and the Specification recites evidence where the computer readable medium is defined as a "wave" (such as a carrier wave).

With regard to claims 30-41, applicant is unaware of, and the Office Action does not provide, any supporting law or USPTO rules requiring claims to be limited to a recitation of hardware in order to be statutory subject matter. Nor is applicant aware of any law or rule stating that software is non-statutory subject matter. Rather, as the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility provides, when determining whether a claim complies with the subject matter eligibility requirement of 35 U.S.C. §101, a multi-step inquiry is undertaken. First, it is determined whether the claims falls under an enumerated statutory category (process, machine, manufacture, or composition of matter). Then, if the claim does not fit into an enumerated statutory category, it is determined whether the claim falls within a §101 judicial exception. (See Interim Guidelines at pgs. 11-31.)

Speaking to claims 30-41, applicant first submits that they fall under an enumerated statutory category as a machine. For example, with respect to claim 30, Figures 1 and 9, as well as their related description in the specification, of the present application provide support for the physical implementation of this claim. The resource use determinator 914 and the resource optimizer 916 are described as components of operation managing logic 910. Operation managing logic 910 corresponds to operation managing logic 124 of Figure 1, which is a component of processor 118 in Figure 1. Processor 118 is a physical component residing in a computing system. As such, claim 30, and its respective dependent claims, falls under an enumerated statutory category as a machine. Similar arguments may be made for claim 41.

However, if claims 30-41 are interpreted as encompassing more than hardware, namely software, then applicant submits the claim falls within a §101 judicial exception. As

stated in *Diamond v. Diehr*, "[i]t is now commonplace than an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection." (450 U.S. 175, 187 (1981).) For software to fall under a judicial exception, the claim must be for a practical application. A practical application can be identified if the claim otherwise produces a "useful, concrete, and tangible result." (*State Street Bank v. Signature Financial Group*, 149 F.3d 1368, 1373-74 (Fed. Cir. 1998).) The focus is on whether the final result achieved by the claim is "useful, tangible and concrete".

Applicant submits claims 30-41 do, in fact, achieve a "useful, tangible, and concrete" result. Claim 30 identifies a predefined behavior of a virtual machine monitor (VMM) and utilizes processor-managed resources based on the identified predefined behavior. Claim 35 determines that a transition from a VMM to a virtual machine (VM) is about to occur, determines the type of transition being made, and notifies a processor of the type of transition. Claim 41 receives from a VMM a request to perform a transition from the VMM to a VM and performs a set of operations according to a type of transition. These functions are more than merely abstract ideas or laws of nature. Each of the functions provided by claims 30, 35, and 41, as well as their respective dependent claims, are "useful, tangible, and concrete" results.

Therefore, applicant submits that claims 30-41 are eligible subject matter for patentability. Therefore, applicant respectfully requests the 35 U.S.C. §101 rejection to claims 30-41 be withdrawn.

With regard to claims 56-58, the specification has been amended to remove any reference to a "carrier wave" embodiment. As such, applicant respectfully requests the 35 U.S.C. §101 rejection to claims 56-58 be withdrawn.

35 U.S.C. §102

Claims 1-58 are rejected under 35 U.S.C. §102(b) as being anticipated by Shorter, (U.S. Patent No. 5,063,500, hereinafter "Shorter"). Applicant submits that the present claims are patentable over Shorter.

Shorter discloses a method for executing distributed applications in a data processing network. (Shorter at col. 5, ll. 63-64.) Specifically, Shorter discloses a method to preserve resources during the execution of distributed application programs in an SNA type data processing network that supports program to program communication between an Intelligent Work Station (IWS) and a host processor in accordance with SNA Logical Unit 6.2 protocols when a Virtual Machine Pool Manager exists at the host processor. (Shorter at Abstract.)

Claim 1 recites, in part, identifying a predefined behavior of a virtual machine monitor (VMM) with respect to one or more virtual machines (VMs). Applicant submits that Shorter does not disclose or suggest this feature of claim 1. The Office Action cites column 11, lines 61-64 of Shorter as disclosing this feature. (Office Action at pg. 3, pt. 9.) This portion of Shorter states "[t]he Pool Manager 46 scans its control block 52 entries that represent virtual machines in the VM pool to determine if the user already has a virtual machine in the pool doing work on his behalf." Applicant submits this is not the same as *identifying a predefined behavior of a virtual machine monitor (VMM) with respect to one or more virtual machines (VMs).* Nothing in the cited portion of Shorter discusses identifying

any predefined behavior of a VMM with respect to a VM. As such, Shorter does not disclose or suggest the cited feature of claim 1.

Therefore, claim 1, as well as its dependent claims, is patentable over Shorter. Independent claims 30 and 50 also recite, in part, identifying a predefined behavior of a virtual machine monitor (VMM) with respect to one or more virtual machines (VMs). As discussed above, Shorter does not disclose or suggest such a feature. As a result, claims 30 and 50, as well as their respective dependent claims, are patentable over Shorter for the reasons discussed above with respect to claim 1.

Claim 9 recites, in part, determining that a transition from a virtual machine monitor (VMM) to a virtual machine (VM) is about to occur. Applicant submits that Shorter does not disclose or suggest this feature of claim 9. The Office Action cites column 14, lines 47-59 of Shorter as disclosing this feature. (Office Action at pg. 5, pt. 17.) This portion of Shorter states:

> A) providing an Operating Syustem for said IWS which attaches an process identifier (PRID) and a thread identifier (THRID) to predefined segments of said resident application program that include LU 6.2 type conversation requests,
> B) transmitting said PRID and THRID identifiers to said host at the time said request is transmitted to said host to permit said Virtual Machine Pool Manager to decide based on said transmitted identifiers and previously received THRID identifiers whether to assign said request to an active or idle virtual machine in said pool

Applicant submits that this is not the same as determining a transition from a VMM to a VM is about to occur. Nothing in the above cited portion of Shorter speaks to transitioning from the Pool Manager to a virtual machine. The above cited portion seems to

solely discuss how to determine where to assign a request in a virtual machine pool. As such, Shorter does not disclose or suggest the cited feature of claim 9.

Therefore, claim 9, as well as its dependent claims, is patentable over Shorter. Independent claims 35 and 56 also recite, in part, determining that a transition from a virtual machine monitor (VMM) to a virtual machine (VM) is about to occur. As discussed above, Shorter does not disclose or suggest such a feature. As a result, claims 35 and 56, as well as their respective dependent claims, are patentable over Shorter for the reasons discussed above with respect to claim 9.

Claim 19 recites, in part, receiving from a VMM a request to perform a transition from the VMM to a VM, the request indicating a type of transition, the type of transition being based on invocation information of the VM. Applicant submits that Shorter does not disclose or suggest this feature of claim 19. The Office Action does not provide any specific explanation of how Shorter discloses or suggests this feature, other than stating the claims 19-58 are rejected for the same reasons as claims 1-18. (Office Action at pg. 7, pt. 27.) Similar to the discussion with respect to claims 1 and 9, Applicant can find no disclosure or suggestion of the cited feature of claim 19 anywhere in Shorter. As such, Shorter does not disclose or suggest the cited feature of claim 19.

Therefore, claim 19, as well as its dependent claims, is patentable over Shorter. Independent claims 41 and 53 also recite, in part, receiving from a VMM a request to perform a transition from the VMM to a VM, the request indicating a type of transition, the type of transition being based on invocation information of the VM. As discussed above, Shorter does not disclose or suggest such a feature. As a result, claims 41 and 53, as well as

their respective dependent claims, are patentable over Shorter for the reasons discussed above with respect to claim 19.

Applicant respectfully submits that the rejections have been overcome and that the claims are in condition for allowance. Accordingly, applicant respectfully requests the rejections be withdrawn and the claims be allowed.

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Applicant respectfully petitions for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: May 15, 2008

Ashley R. Essick
Reg. No. 55,515

1279 Oakmead Parkway
Sunnyvale, California 94085-4040
(303) 740-1980